Clinical Snippets

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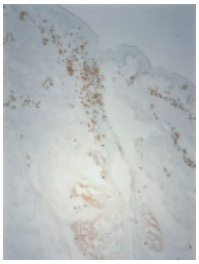
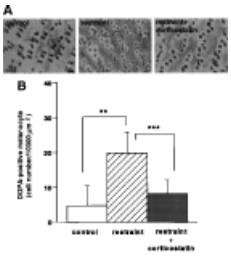
IN THE BEGINNING



In acne, inflammatory cells and proinflammatory molecules (Il-1) were present in clinically normal pilosebaceous follicles from uninvolved skin on the back. They were there before the hyperproliferation of follicular cells often thought of as the first event in comedone formation. Jeremy and coworkers (p. 20) postulate that inflammation, with a CD4+ lymphocytic infiltrate, is the initial event in acne. Therapeutic implications include the importance of treating "uninvolved skin" of patients with acne and the role of anti-inflammatory agents in therapy. Thus acne, like psoriasis, may join the ranks of epidermal diseases in which inflammation is a necessary factor in causation.

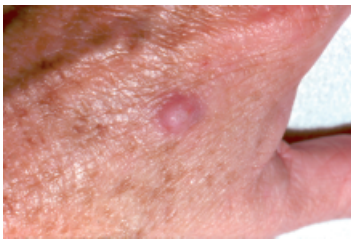
STRESS-INDUCED HYPERPIGMENTATION



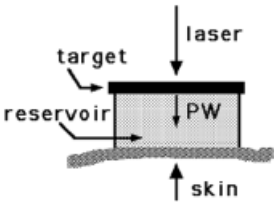
In photographs of late nineteenth-century immigrants from Europe to the US many individuals show apparent hyperpigmentation. Inoue and colleagues (p. 165) show that mice caged at high population density and stressed by restraining them for several hours have increased melanocytes and increased UVB-induced tanning. Corticostatin inhibited the hyperpigmentation. The immigration experiment cannot be repeated, but this group lived with stress and high population density and can thus be considered an historical antecedent for the reported experiments.

MEASURING UVA INDUCED IMMUNOSUPPRESSION

Sun protective factors (SPF) measure the ability of a sunscreen to protect against sunlight-induced erythema. The pathway from sun exposure to skin cancer is multistepped and usually of long duration. For over a decade the enhancing role of immunosuppression for skin cancers has been demonstrated in experimental models that have corroborated clinicians' extensive observation of increased skin cancers in immunosuppressed patients after organ transplantation. A model for measuring the effect of UVA photoprotection on the immunosuppression of contact hypersensitivity is presented by Poon and coworkers (p. 184).



STAR WARS IN THE STRATUM CORNEUM



Menon and coworkers (p. 104) report using a Q-switched ruby laser to structurally change the intercellular lipid bilayer in the human stratum corneum and increase percutaneous transport of large molecules. The pressure produced (500 bar) is two orders of magnitude higher than the pressure produced by ultrasound (0.1–5 bar). The rate of increase in pressure by the laser is a billion atmospheres/second. These pressures in the stratum corneum have a response limited to the extracellular bilayer, and they do not affect the bilayer in the intracellular lamellar body. This technique has been shown to increase the transport of insulin and dextran across the stratum corneum. Drug patches with self-contained lasers may be more than a few years off, but don't underestimate technology.

BUTCHER, BAKER, CANDLESTICK MAKER

In a population-based study from Northern Bavaria, Germany, 37 percent of 3730 workers with occupational dermatitis had an atopic skin diathesis, as reported by Dickel and coworkers (p. 37). The researchers determined Diepgen atopy scores and odds ratios, and attributable risks were calculated for over two dozen occupational categories. Pastry cooks, butchers, florists, health care workers, and dental technicians led the list, while metal processors, unskilled workers, and construction and cement workers had lower odds ratios and attributable risks. The authors conclude that those with atopic skin are more susceptible to irritating substances in the workplace. The high baseline rate of atopy makes counseling challenging. This data-rich paper should be an important source for those instituting preventive measures in many occupational settings.